

Smoking may affect some women's likelihood of giving birth to twins

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Cigarette smoke damages DNA within minutes after inhalation. Credit: iStock

A new study provides a possible explanation of reports that mothers of twins are more likely to have smoked, despite evidence that nicotine reduces fertility.

Nicotine has an effect on hormone production, and while smoking may have [deleterious effects](#) on fertility, the study found that it may raise the likelihood of producing [twins](#) in women with certain genetic backgrounds. The researchers discovered significant interactions

between smoking and variants in several genes, especially one in the TP53 gene.

"Although we demonstrated that there are significant differences in gene variant frequencies in mothers of twins compared with mothers of singletons, the most important difference between groups of mothers in our study is whether or not the [mothers](#) smoked," said Dr. Lorena Madrigal, senior author of the *American Journal of Human Biology* study.

"We propose that smoking and a variant of TP53 work together to disrupt the normal balance that leads to the gestation of a single infant, making having twins more likely in women who smoke and who have this particular TP53 variant."

More information: Huang, H., Clancy, K. B.H., Burhance, C., Zhu, Y. and Madrigal, L. (2015), Women who deliver twins are more likely to smoke and have high frequencies of specific SNPs: Results from a sample of African-American women who delivered preterm, low birth weight babies. *Am. J. Hum. Biol.*. [DOI: 10.1002/ajhb.22723](https://doi.org/10.1002/ajhb.22723)

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